

INSTALLATION INSTRUCTIONS

SERIES 925 SWINGING PATIO DOOR



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HANDLING, STORAGE, AND PROTECTION OF ALUMINUM

The following precautions are recommended to protect the material against damage. Following these precautions will help ensure early acceptance of your products and workmanship.

A. HANDLE CAREFULLY.

All aluminum materials at job site must be stored in a safe place, well removed from possible damage by other trades. Cardboard wrapped or paper interleaved materials must be kept dry.

B. CHECK ARRIVING MATERIALS.

Check for quantity counts and keep records of where various materials are stored.

C. KEEP MATERIALS AWAY FROM WATER, MUD, AND SPRAY.

Prevent cement, plaster or other materials from damaging the finish.

D. PROTECT THE MATERIALS AFTER ERECTION.

Protect erected frame with polyethylene or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions, and acid based materials used to clean masonry are harmful to the finish. If any of these materials come in contact with the aluminum, immediately remove with water and mild soap.

ORDER OF ASSEMBLY AND INSTALLATION

HANDLING, STORAGE, AND PROTECTION OF ALUMINUM	02
GENERAL INSTALLATION NOTES	03
BEFORE INSTALLATION	04
INSTALLATION PREPARATION	05
INSTALLATION	05 - 07
GLAZING INSTRUCTIONS / GLAZING THE DOOR	08 - 10
DOOR STOP ADJUSTMENT	11
HINGE ADJUSTMENT	12
DOOR HANDLE INSTALLATION	13 - 14
DOOR HANDLE OPERATION (TEAR OFF)	15

The rapidly changing technology within the architectural aluminum products industry demands that C.R. Laurence/U.S. Aluminum reserve the right to revise, discontinue, or change any product line, specification, or electronic media without prior written notice.

NOTE: Dimensions in parentheses () are millimeters unless otherwise noted.

GENERAL INSTALLATION NOTES

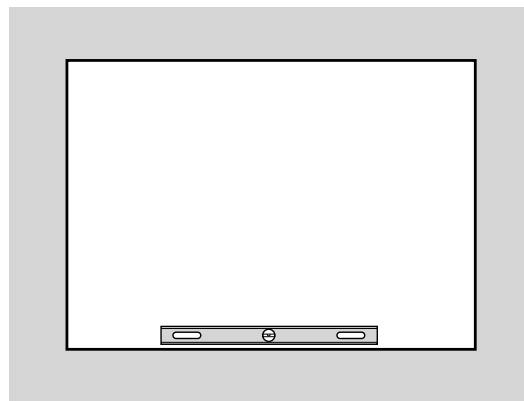
RECOMMENDED GUIDELINES FOR ALL ALUMINUM PRODUCTS:

- 1. REVIEW CONTRACT DOCUMENTS.** Check shop drawings, installation instructions, architectural drawings, and shipping lists to become thoroughly familiar with the project. The shop drawings take precedence and include specific details for the project. Note any *field verified* notes on the shop drawings prior to installing. The installation instructions are of a general nature and cover most conditions.
- 2. INSTALLATION.** All materials are to be installed plumb, level, and true.
- 3. SURROUNDING CONDITIONS.** Make certain that construction which will receive your materials is in accordance with the contract documents. If not, notify the general contractor in writing and resolve differences before proceeding with work.
- 4. ISOLATION OF ALUMINUM.** Aluminum to be placed in direct contact with uncured masonry or incompatible materials should be isolated with a heavy coat of zinc chromate or bituminous paint.
- 5. SEALANTS.** Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, cleaning/priming, tooling, adhesion, etc. It is the responsibility of the **Glazing Contractor** to submit a statement from the sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants, and interpreting test results relative to material performance, including recommendations for primers and substrate preparation required to obtain adhesion. The chemical compatibility of all glazing materials and framing sealants with each other and with like materials used in glass fabrication must be established. This is required on every project.
- 6. FASTENING.** Within the body of these instructions "fastening" means any method of securing one part to another or to adjacent materials. Only those fasteners used within the system are specified in these instructions. Due to the varying perimeter conditions and performance requirements, perimeter and anchor fasteners are not specified in these instructions. For perimeter and anchor fasteners refer to the shop drawings or consult the fastener supplier.
- 7. BUILDING CODES.** Due to the diversity in state/provincial local, and federal laws and codes that govern the design and application of architectural products, it is the responsibility of the individual architect, owner, and installer to assure that products selected for use on projects comply with all the applicable building codes and laws. U.S. Aluminum exercises no control over the use or application of its products, glazing materials, and operating hardware and assumes no responsibility thereof.
- 8. COORDINATION WITH OTHER TRADES.** Coordinate with the general contractor any sequence with other trades which offset curtain wall installation (i.e. fire proofing, back-up walls, partitions, ceilings, mechanical ducts, converters, etc.).
- 9. CARE AND MAINTENANCE.** Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA 609.1 for anodized aluminum and 610.1 for painted aluminum.

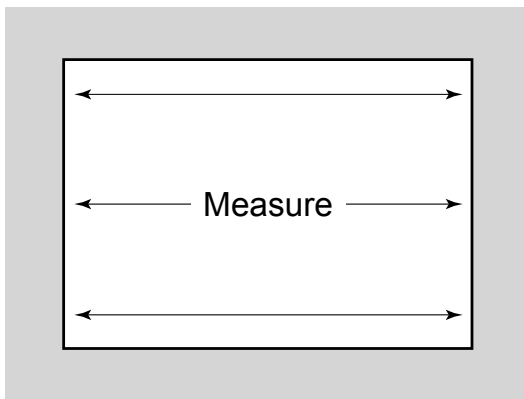
BEFORE INSTALLATION

1. The rough opening should be checked for the correct size. Allow 1/4" gap on each side of the door frame with a 1/4" gap at the top and no gap at the bottom. Water must drain away from door threshold.
2. Verify the framing is plumb, straight, and true around rough opening. **See DETAIL A.** Measure the opening at each end and at the center, vertically and horizontally. Make corrections to openings as required. Measure opening diagonally to check squareness.
3. Establish the face of the door line at the head, sill, and jambs. This reference is to be arrived at by using the architectural plans, general contractor's reference lines, and shop drawings.

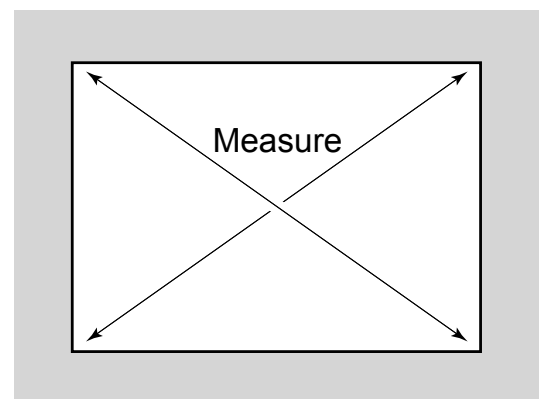
NOTE: For proper door operation and drainage it must be installed PLUMB and LEVEL.



LEVEL



HORIZONTAL DIMENSION



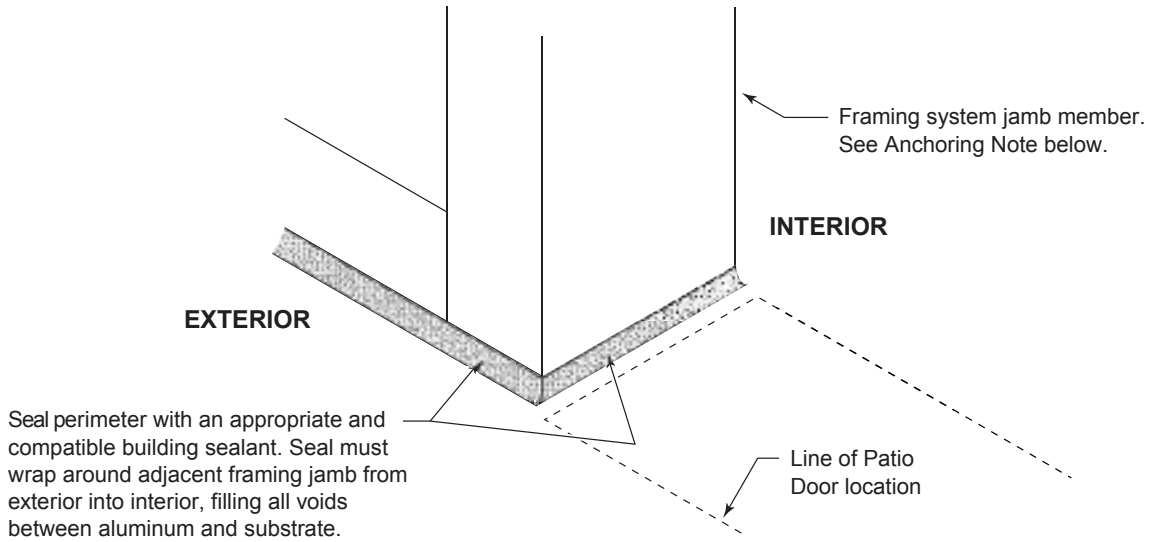
SQUARE

DETAIL A

NOT TO SCALE

INSTALLATION PREPARATION

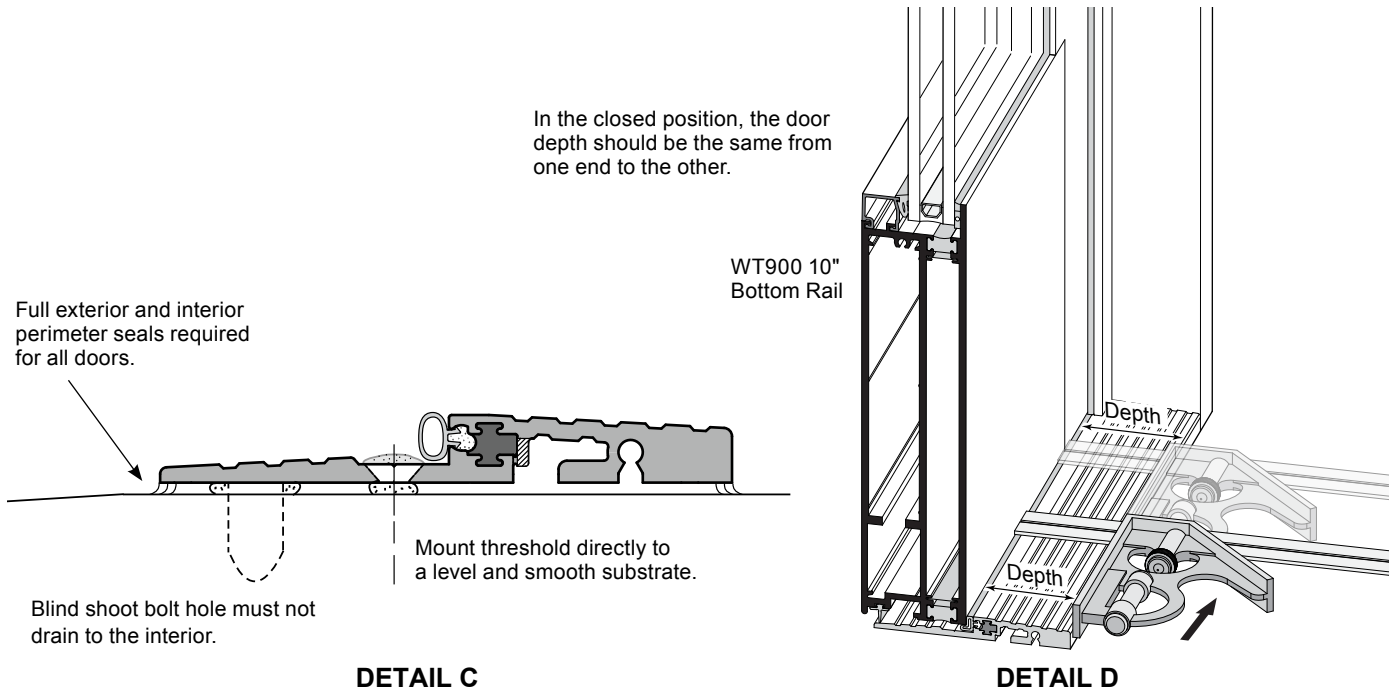
If installing within a framing system, installer must make sure the perimeter sealant of the framing system is properly sealed. The perimeter seal must have full coverage from exterior to interior and be compatible with sealant to be used with patio door installation. See **DETAIL B**. Shoot Bolt (or receiver) is the installers responsibility at flashed locations, or voided areas. Use appropriate anchors for application.



DETAIL B

INSTALLATION

ANCHORING NOTE: Fasteners, substrate, and any surrounding system components that are to structurally support loads imposed on this product must be adequate in strength and workability. Consult U.S. Aluminum for anchoring recommendations.



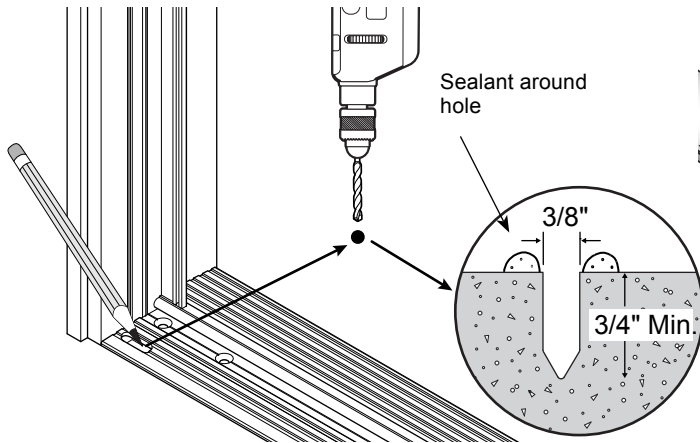
DETAIL C

DETAIL D

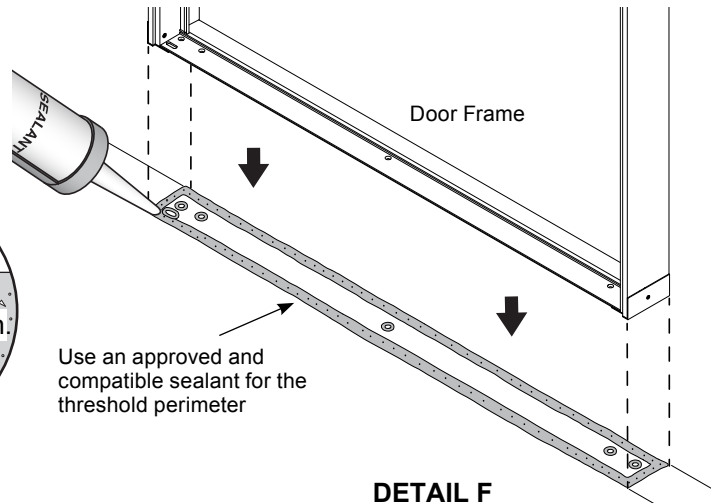
NOT TO SCALE

INSTALLATION (CONTINUED)

- Stand door and frame into rough opening. Make sure door is closed and latched. Use jamb shims to hold in place.
- Plumb and square the frame maintaining pressure on jamb shims.
- Open door carefully without moving jamb and threshold positions.
- Mark shoot bolt and threshold fastener positions onto the substrate. **See DETAIL E.**



DETAIL E

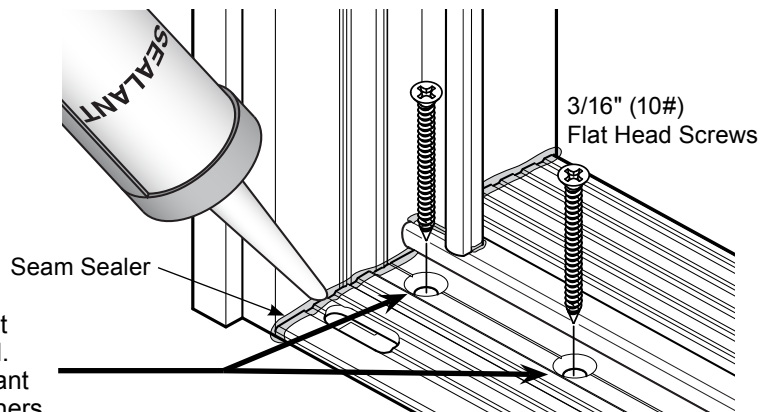


DETAIL F

- Remove door from the opening. Drill a hole 3/8" (9.5 mm) in diameter by a minimum 3/4" (19 mm) deep into concrete for the shoot bolt hole. **See DETAIL E.** Drill the remaining mounting holes. Remove all debris from sill area for a proper sealing surface.
- Apply a bead of an approved and compatible sealant along the perimeter of the threshold. **See DETAIL F.** Add another bead of sealant around the shoot bolt hole and the threshold mounting holes. Apply pieces of masking tape, approximately 1" long, over the top surface of each mounting hole of the threshold to prevent the oozing of sealant. **See DETAIL E.** Reinstall door into opening on top of sealant. **See DETAIL F.**
- Attach threshold with 3/16" (10#) flat head screws appropriate for the substrate or appropriate anchors for non-concrete application. Use CRL RTV408 to seal over screw heads, but do not apply to door gasket. Optional: Apply a small amount of silicone sealant into each mounting hole prior to installing fasteners. Wipe excess sealant from screw heads. **See DETAIL G.**
- Attach jambs to the opening. **See DETAIL H on page 07.**

IMPORTANT NOTE: A seam sealer has been applied at the factory along the threshold and jamb joints. During shipping and handling the seals may develop tears and cracks. Inspect thresholds carefully. If necessary, apply Dow Corning 1299 Silicone Seam Sealer as required. This joint must be installed water tight. **See DETAIL G.**

After screws are installed, apply a small amount of silicone sealant over the screw heads to seal. Optional: Apply a small amount of silicone sealant into each mounting hole prior to installing fasteners. Wipe excess sealant from the screw heads.

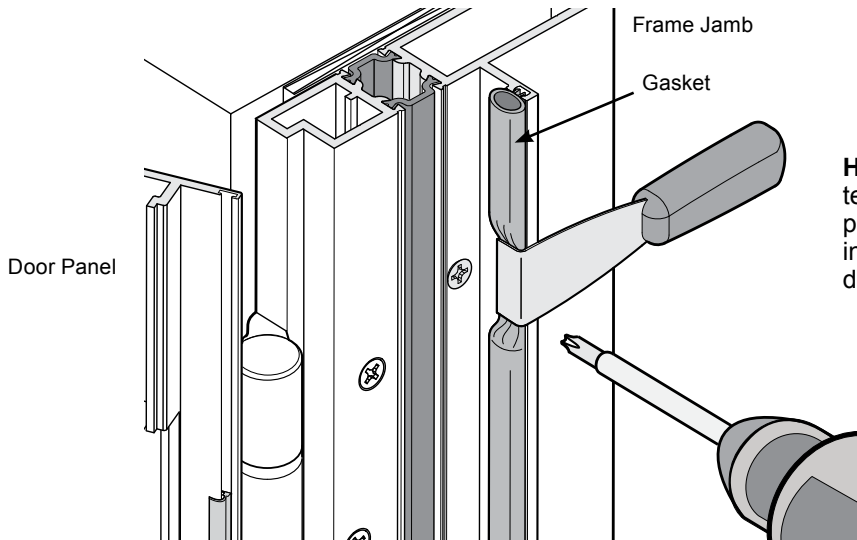


DETAIL G

NOT TO SCALE

INSTALLATION (CONTINUED)

9. Install frame plumb and square. Shim frame sides as required. Shims are to be positioned at each fastener and hinge locations. Concrete floor at door location must be smooth and level.
10. Anchor the frame with #10 flat head screws (supplied by others) 18" O.C. Length to be specified on approved shop drawings. Seal over heads of each anchor screw with silicone sealant and tool sealant smooth. Do not apply sealant to door gasket. Optional: Apply a small amount of silicone sealant into each mounting hole prior to installing fasteners. After fasteners are installed, wipe away excess sealant.

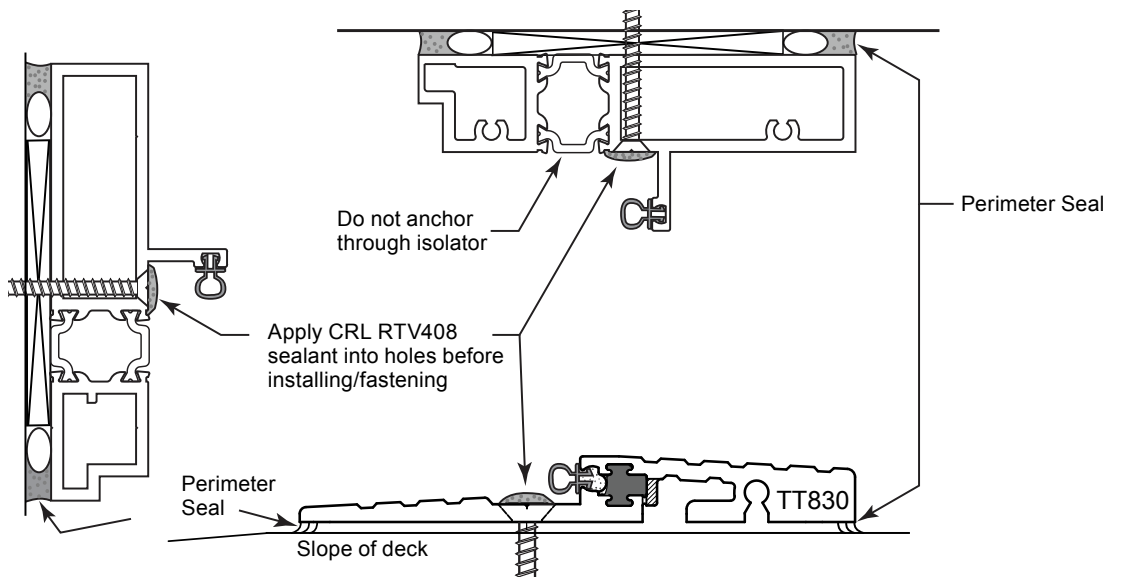


HELPFUL HINT: Compress gasket temporarily while installing fasteners to prevent damage to the gasket as seen in **DETAIL H**. Use caution not to mar the door stop gasket of the frame members.

DETAIL H

11. Apply perimeter seals continuously to the full perimeter of interior and exterior of door frame. Sealant must be compatible with perimeter sealant of any adjacent framing system. Refer to approved shop drawing for any job specific sealant requirements. Follow sealant manufacturer's guidelines for cleaning, surface preparation, and application. Primer must be used on painted finishes before any sealing is done in order to achieve proper adhesion.

NOTE:
Wipe excess silicone from the screw heads making sure not to hinder primary gasket/seal.



DETAIL I

NOT TO SCALE

GLAZING INSTRUCTIONS

These instructions assume that the installer has adequate trade knowledge in aluminum glazing systems and aluminum entrance installation guidelines and procedures. This includes frame leveling and squaring techniques, surface cleaning for sealant application, and perimeter seal waterproofing. The following instructions give product specific installation information required to ensure proper product performance. In the event of adverse field installation conditions, it is the responsibility of the installer to contact U.S. Aluminum for recommendations and support prior to product installation.

GLAZING THE DOOR

GLASS SIZE = Daylight Opening (D.L.O.) + 1" (25.4 mm)

NOTE: This formula does not take into account glass tolerances.

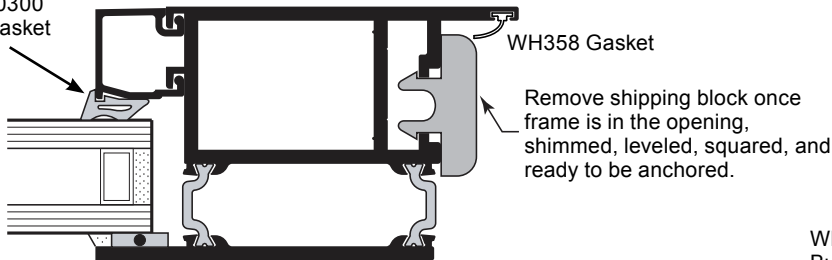
Consult glass manufacturer before ordering glass.

Inspect all received materials for damages during shipping prior to glazing or installation.

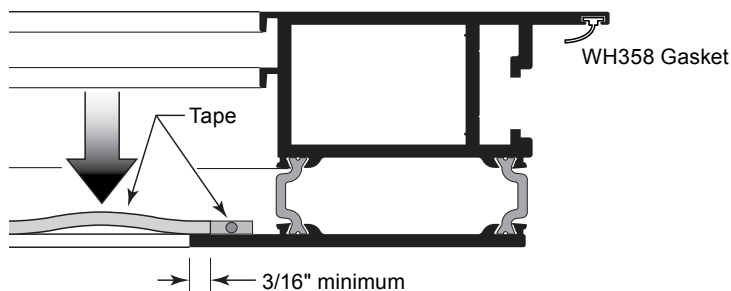
1. Remove temporary shipping blocks located at top and bottom rails and hinge and lock stiles.
See DETAIL J.
2. Clean glazing fins with solvent prior to applying glazing tape.
3. Apply glazing tape Cat. No. 98418X12BL, 1/8" x 1/2", to stiles (D.L.O. + 1-1/8"), inset 3/16" to allow for cap bead. Apply tape to the top and bottom rails, butting tight to the vertical tape, leaving an extra amount at each end to ensure a tight joint. **See DETAIL K.**
4. Place WB41000 Walk Blocks in door as shown in **DETAIL L.**
5. Cut wedge gasket to size. Gaskets should be cut 1/8" longer per foot of Daylight Opening to allow for shrinkage.
6. Place SB22200 Setting Block as shown in **DETAIL L.**

NOTE: Glass stop and wedge gasket are shipped with door frame

WH34400300
Wedge Gasket



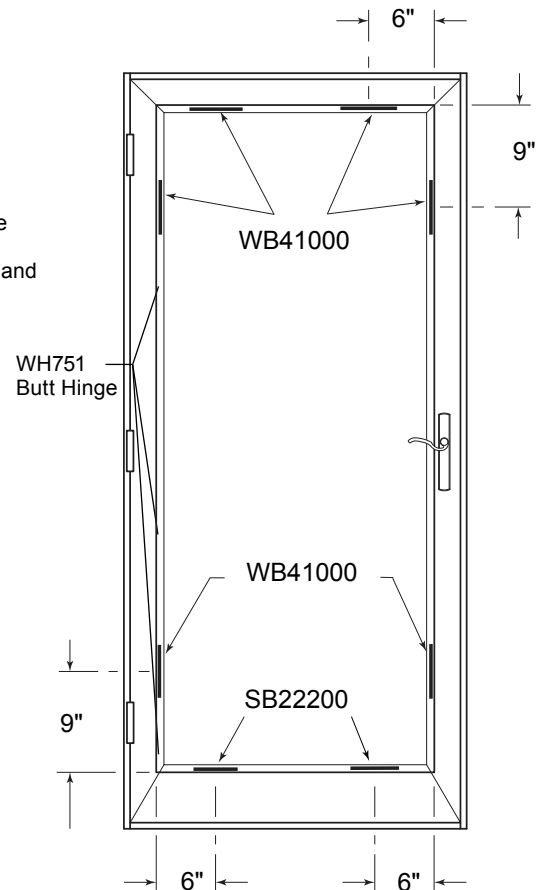
DETAIL J



DETAIL K

NOTE:

Butt the horizontal tape and vertical tape to form a closed joint. Daub the butted joint with CRL RTV408 sealant to eliminate gaps.



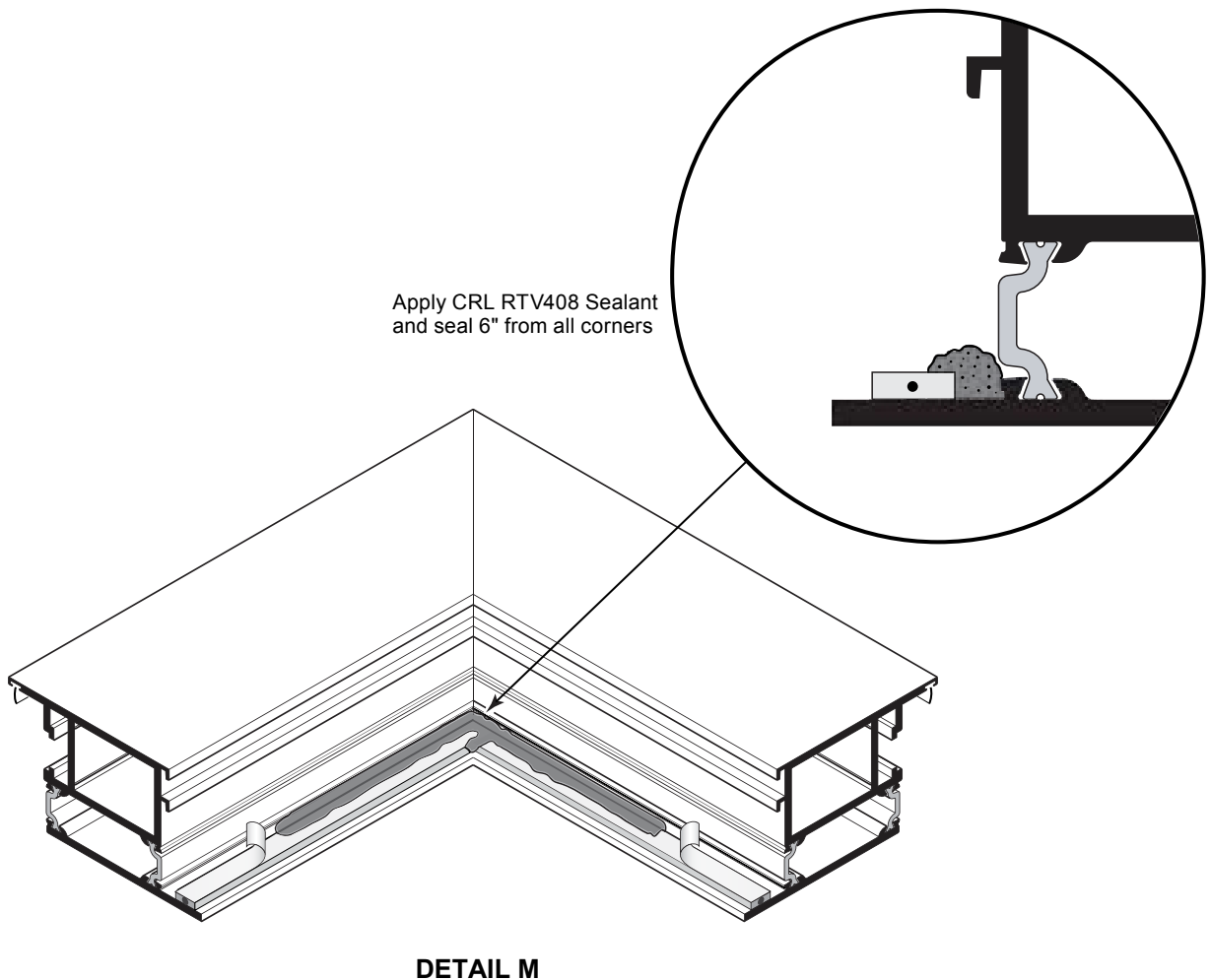
DETAIL L

NOT TO SCALE

GLAZING THE DOOR (CONTINUED)

7. Clean glass edges with solvent. Avoid touching edges after cleaning.
8. Prior to glazing, peel protective paper from the glazing tape. **DO NOT TOUCH** exposed tape surfaces with fingers or any tool. Do not leave glazing tape surface unprotected, remove paper just prior to setting glass.
9. Apply a 6" bead of CRL RTV408 sealant at each corner of glazing tape. Sealant should fill reveal and cover approximately half of inside edge of tape as shown in **DETAIL M**.

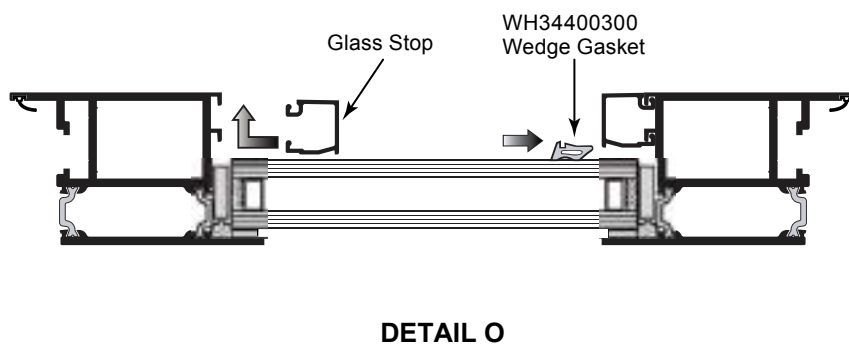
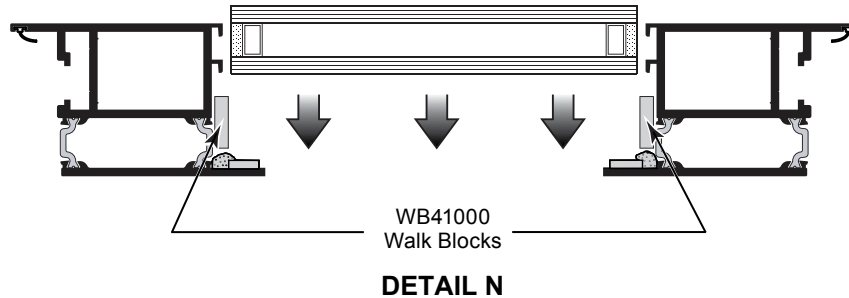
NOTE: Door MUST be glazed while sealant is wet.



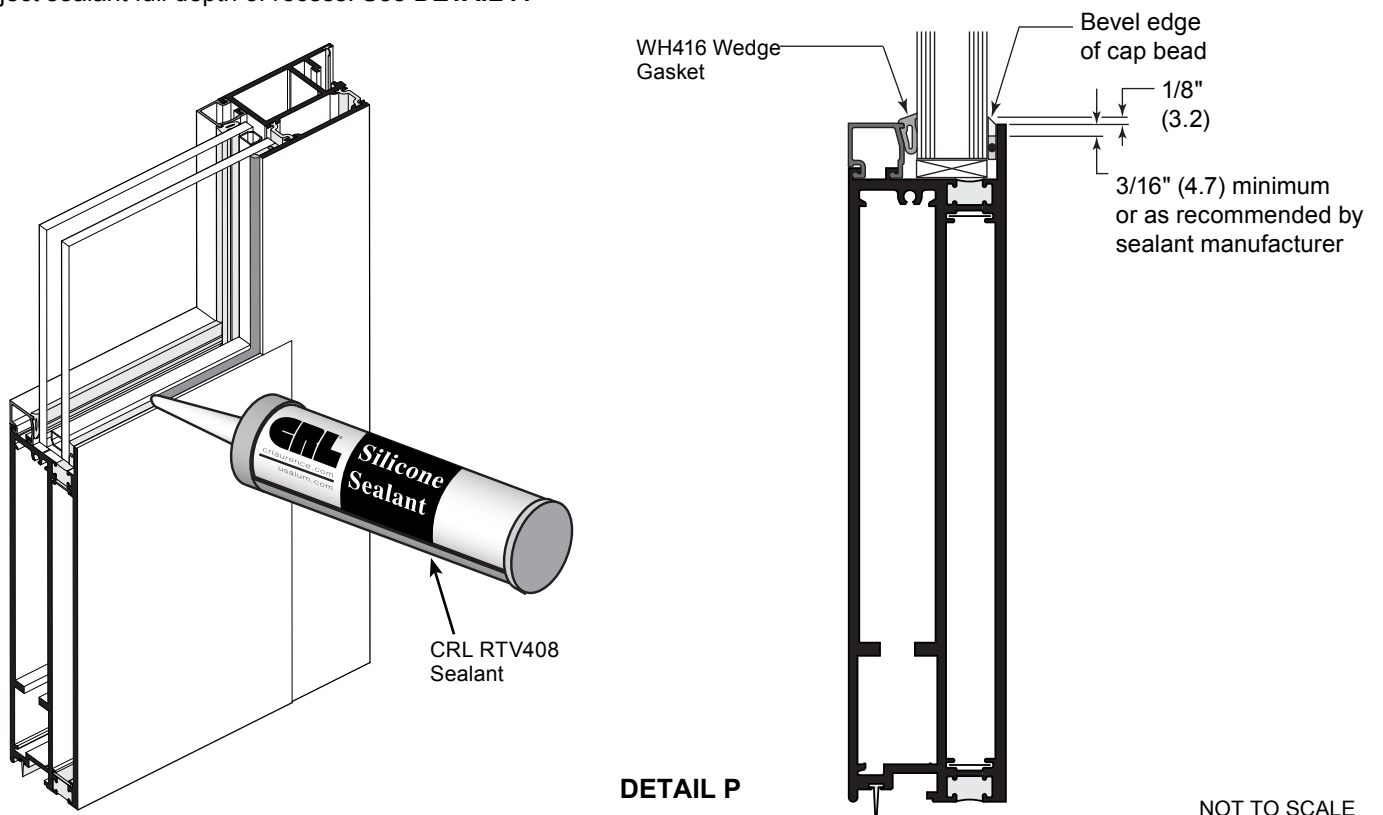
NOT TO SCALE

GLAZING THE DOOR (CONTINUED)

10. Place glass square into opening pressing firmly against glazing tape. See **DETAIL N**.
11. Install glass stops and wedge gaskets immediately. See **DETAIL O**.



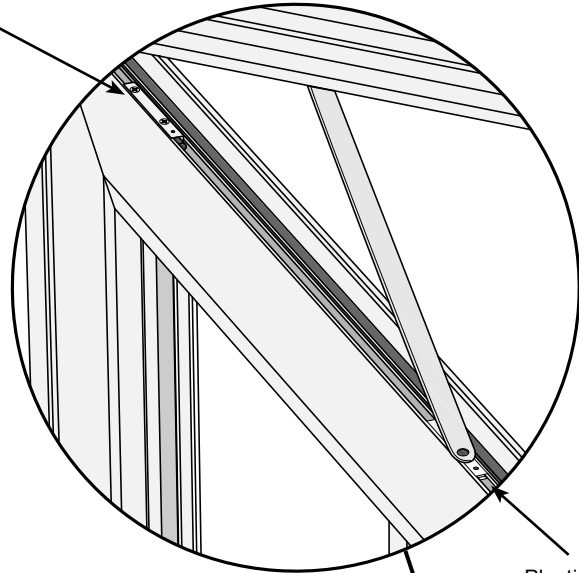
12. Apply cap bead of CRL RTV408 sealant a full perimeter between glazing fin and glass, be sure to inject sealant full depth of recess. See **DETAIL P**.



DOOR STOP ADJUSTMENT

NOTE: Top Arm Door Stops are factory installed. Adjustment may be required for optimum minimum and maximum door swing travel.

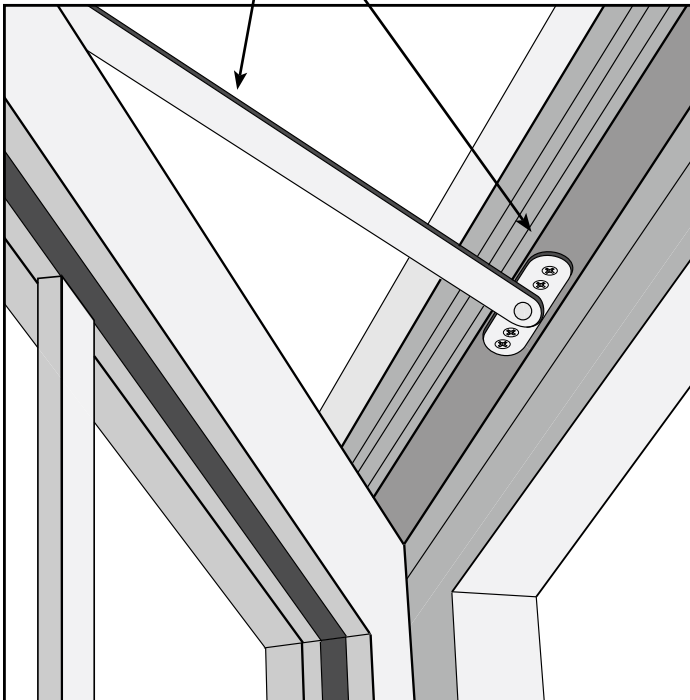
Adjustable Aluminum Stop with Rubber Bumper



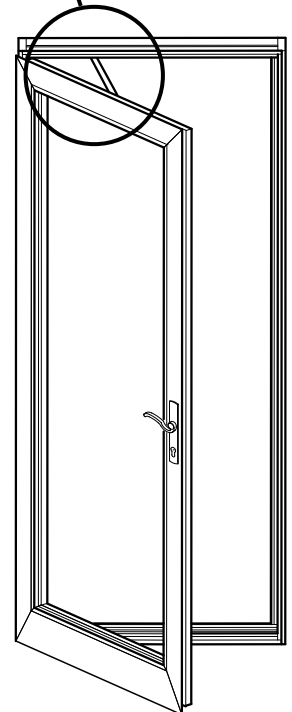
Plastic Shoe with Friction Pad

TOP VIEW OF DOOR STOP SLIDER TRACK

Stainless Steel Arm and Mounting Bracket



BOTTOM VIEW OF MOUNTING BRACKET



NOT TO SCALE

HINGE ADJUSTMENT (OPTIONAL COMPONENT)

Tilt Adjustment

Top and Bottom Hinges Only.

1. 5/32" Hex Wrench
Use to break free Pin Screw on top and bottom hinges only for side-to-side adjustment
2. Tilt Adjustment Screw ±.070". (Top and bottom hinges only)

1/8" Hex Wrench
Side-To-Side Adjustment

3. Tighten Pin Screws after adjustments

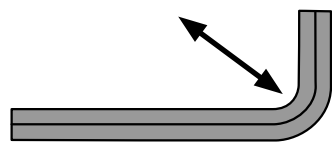
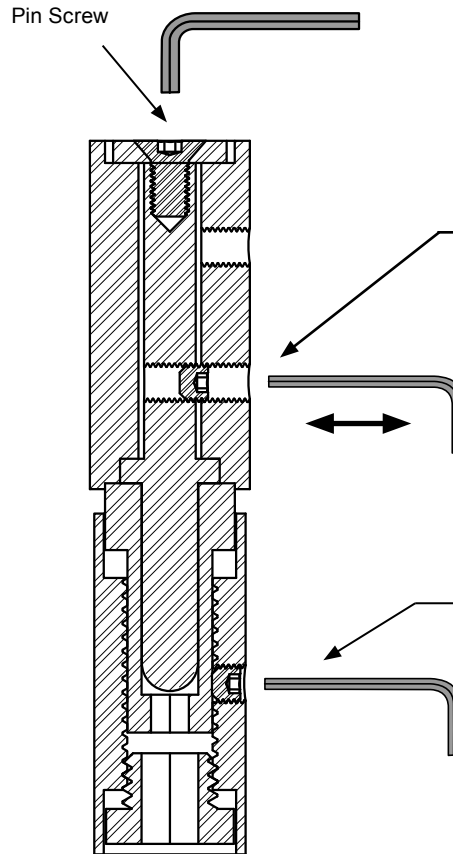
Height and Compression Adjustment

1. 1/8" Hex Wrench
Loosen Collar Lock Screws on all three hinges (1 turn max.) prior to compression and height adjustments.

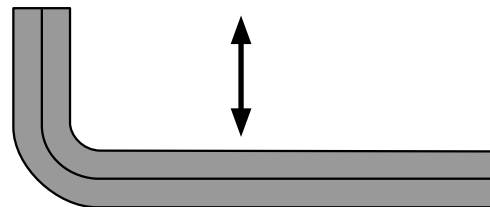
2. Tighten Collar Lock Screws after adjustments.

NOTE:

Hex Wrenches are not included with hinge.



1/4" Hex Wrench for Compression Adjustment (± .020")



3/8" Hex Wrench for Height Adjustment (± .093")

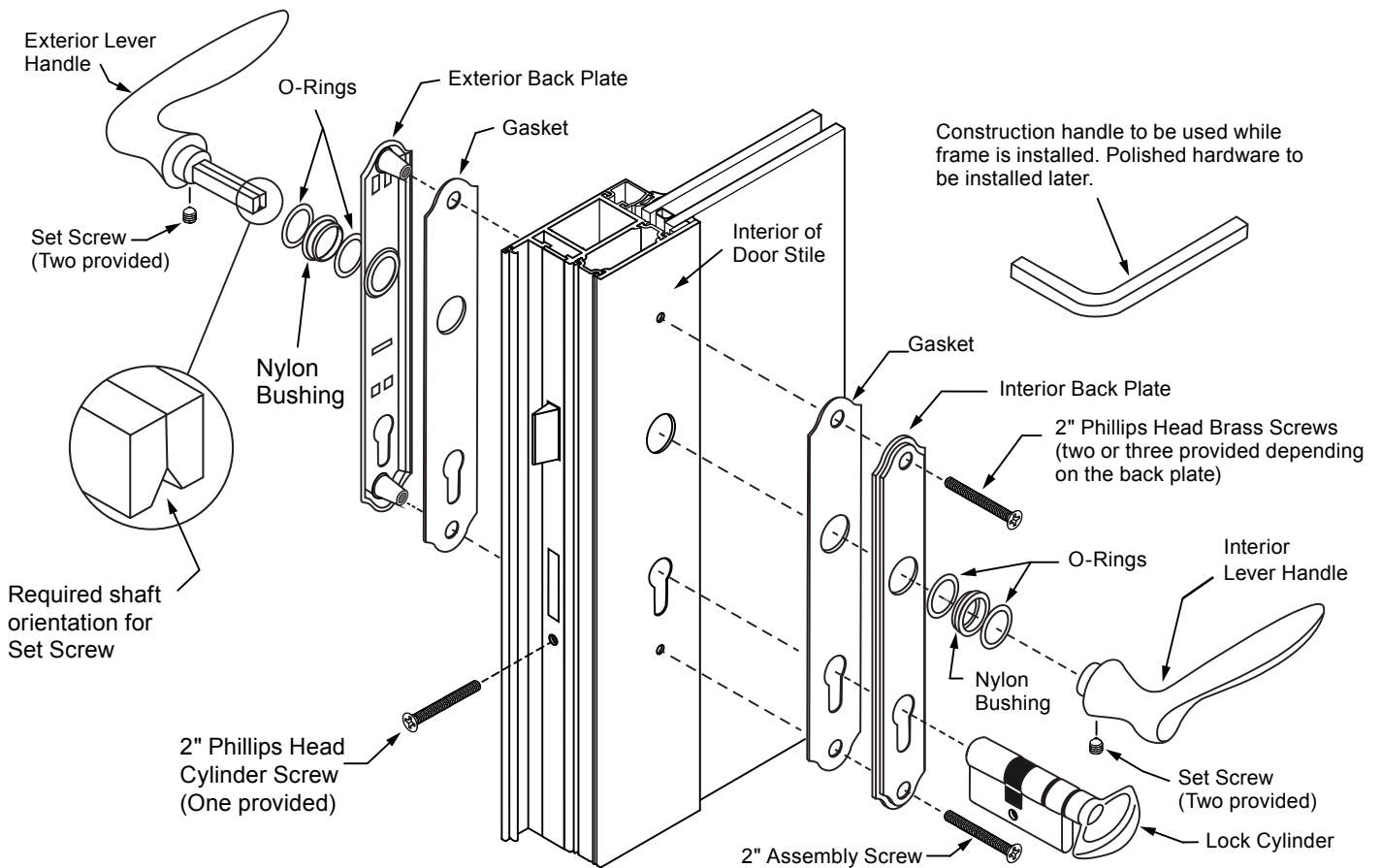
NOTE:

Tighten all Pin Screws and Lock Collars when adjustments are completed

NOT TO SCALE

DOOR HANDLE INSTALLATION

Install lever handle and cover plates as directed per hardware manufacturer's Service Installation Booklet included within hardware package. **DETAIL Q** shows exploded view.



DETAIL Q

NOT TO SCALE

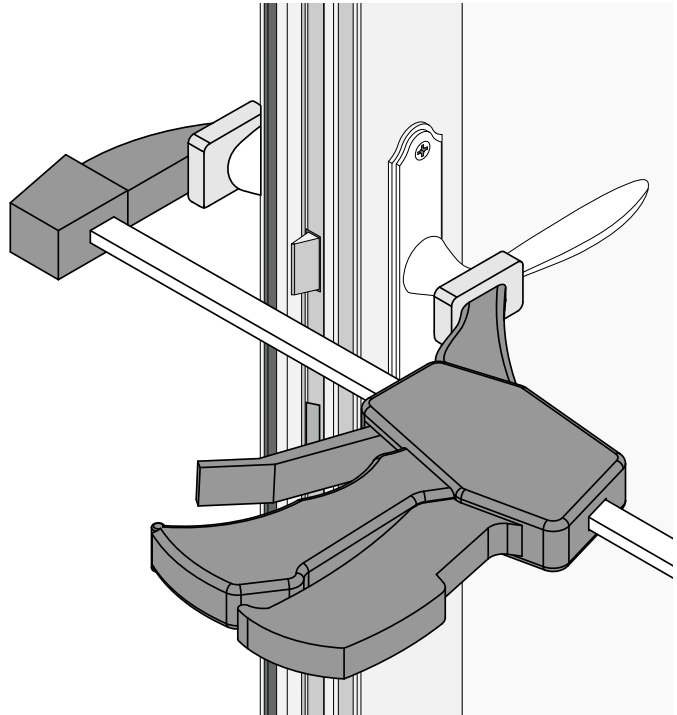
DOOR HANDLE INSTALLATION (CONTINUED)

RESOLVING WATER INFILTRATION AT THE THUMBTURN AND HANDLE:

1. Apply a small amount of silicone to the inside surface of the exterior escutcheon plate gasket.
2. Apply a small amount of silicone grease or petroleum jelly to the o-rings.
3. Apply silicone grease or petroleum jelly around the thumbturn shaft entrance into the interior escutcheon.
4. If an exterior key cylinder is present, apply silicone grease or petroleum jelly into the key hole.

NOTE: Lever Handle O-Rings must be properly installed and compressed in order to provide adequate sealing against water intrusion. **See DETAIL R**

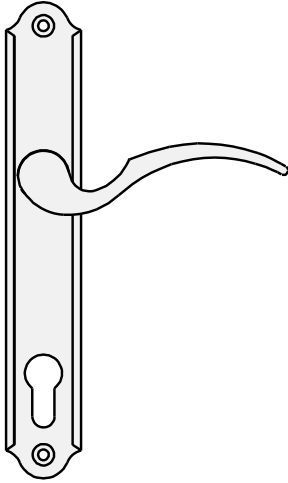
Suggestion: Use a QC512 Quick-Grip Bar Clamp over the handles to compress the assembly while tightening the handle set screws. This will ensure that the O-Ring Seals are properly seated during the handle installation.



DETAIL R

NOT TO SCALE

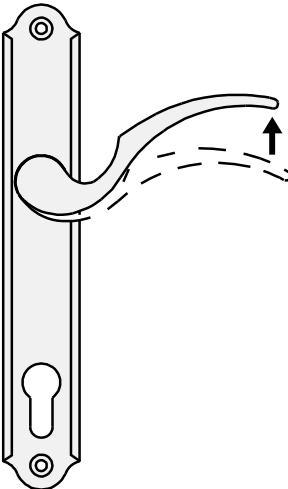
SWING DOOR HANDLE OPERATION



TO LOCK AN AUTOMATIC SYSTEM

Make sure that the door is fully shut and latched. Multi-points will engage automatically when the auto-release pin hits the strike plate mounted on the jamb.

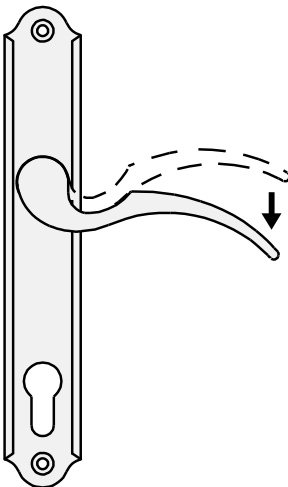
Use a key or the thumbturn to engage the deadbolt after the multi-points are engaged.



TO LOCK A MANUAL SYSTEM

After the door is fully closed and latched, lift the handle to engage the multi-points before engaging the deadbolt.

Use a key or the thumbturn to engage the deadbolt after the multi-points are engaged.



TO OPEN BOTH SYSTEMS

Disengage the deadbolt with a key or the thumbturn, push the handle down until multi-points are retracted, and then open door.

Handles and back plates vary in style.

NOT TO SCALE